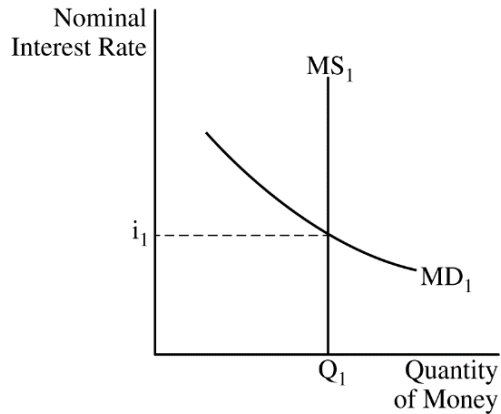


Question 2: Short**5 points**

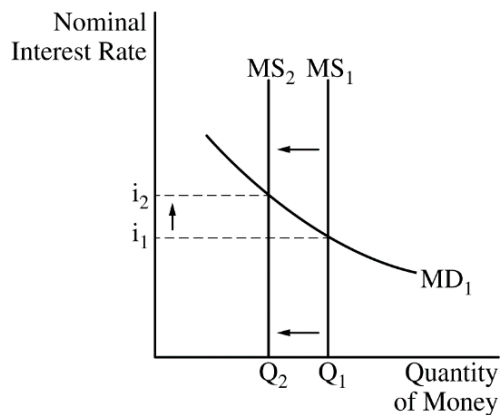
- (a) Calculate the maximum change in the money supply as a decrease of \$500,000 and show your work. **1 point**

$$\text{Change in MS} = \text{Bond Sale} \times \text{Money Multiplier} = -\$100,000 \times \frac{1}{0.2} = -\$500,000$$

- (b) Draw a correctly labeled graph of the money market. **1 point**



- For the second point, the graph must show a leftward shift in the money supply curve, resulting in a higher nominal interest rate. **1 point**

**Total for part (b) 2 points**

- (c) State that nominal gross domestic product will decrease and explain that according to the quantity theory of money ($MV=PY$), a decrease in the money supply will decrease nominal gross domestic product for a given velocity. **1 point**
- (d) State that the price level decreases. **1 point**

Total for question 2 5 points

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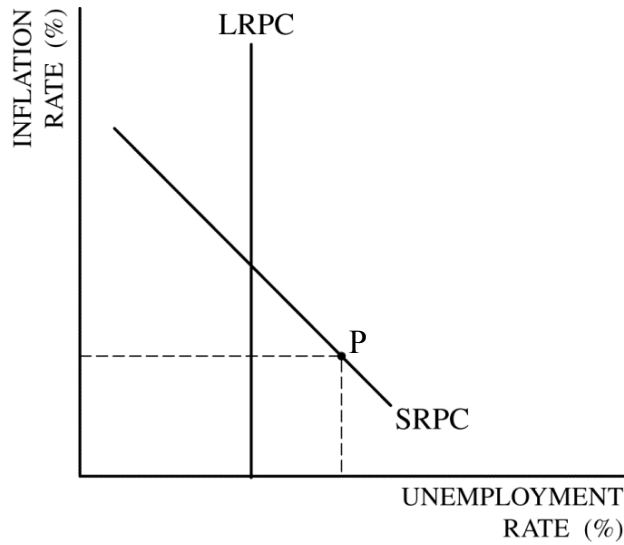
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2016 SCORING GUIDELINES

Question 1

10 points (2+1+1+2+1+1+2)



(a) 2 points:

- One point is earned for drawing a correctly labeled graph showing a vertical LRPC and a downward sloping SRPC.
- One point is earned for showing point P on the SRPC to the right of LRPC.

(b) 1 point:

- One point is earned for stating that SRPC will shift to the left, and for explaining that producing at a level of output below full employment will create higher unemployment and lower inflationary expectations that will result in lower nominal wages and input costs.

(c) 1 point:

- One point is earned for stating that the Federal Reserve should buy bonds.

(d) 2 points:

- One point is earned for stating that the federal funds rate will decrease and for explaining that the money supply will increase, which will increase reserves and decrease the federal funds rate.
- One point is earned for stating that the real interest rate will decrease in the short run.

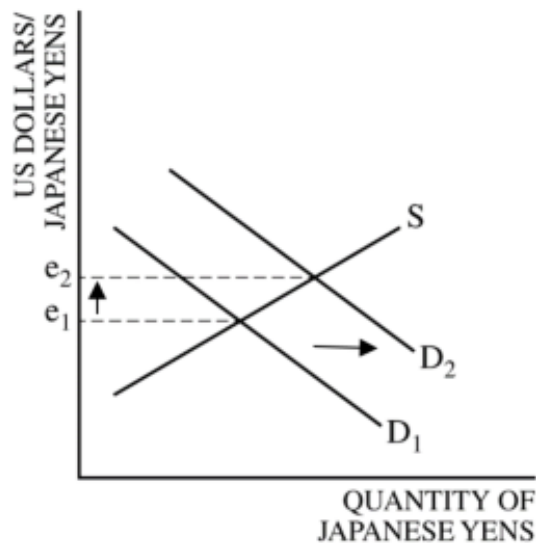
2016 SCORING GUIDELINES**Question 1 (continued)**

(e) 1 point:

- One point is earned for stating that real GDP will increase in the short run and for explaining that a decrease in the real interest rate will increase interest-sensitive spending, which includes consumption and investment in plant and equipment, resulting in an increase in aggregate demand.

(f) 1 point:

- One point is earned for stating that the demand for the Japanese yen will increase in the foreign exchange market.



(g) 2 points:

- One point is earned for drawing a correctly labeled graph of the foreign exchange market for the Japanese yen.
- One point is earned for showing a rightward shift of the demand curve for the yen and showing an increase in the dollar price of the yen (appreciating yen).

2016 SCORING GUIDELINES**Question 2****6 points** (1+1+2+1+1)

(a) 1 point:

- One point is earned for stating that new loans are zero because the bank has no excess reserves (or because the bank is already fully loaned up).

(b) 1 point:

- One point is earned for correctly calculating the maximum amount of new loans that First Superior Bank can make as \$90 ($= \$100 \times (1 - 0.10)$).

(c) 2 points:

- One point is earned for correctly calculating the maximum change over time in loans in the banking system as \$900 ($= \90×10).
- One point is earned for correctly calculating the maximum change over time in demand deposits in the banking system as \$1,000 ($= \100×10).

(d) 1 point:

- One point is earned for correctly calculating the maximum change over time in the money supply in the banking system as \$900 ($= \90×10).

(e) 1 point:

- One point is earned for stating that the money supply can be smaller than the maximum change identified when the public holds more money and /or banks hold more excess reserves.

2016 SCORING GUIDELINES

Question 3

5 points (1+1+2+1)

(a) 1 point:

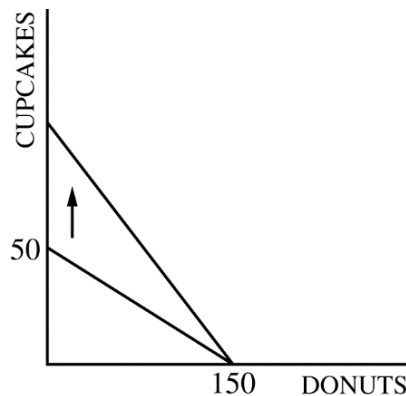
- One point is earned for stating that John has the absolute advantage in producing donuts and for explaining that John can produce more donuts than Erica in one day ($200 > 150$).

(b) 1 point:

- One point is earned for stating that Erica has a comparative advantage in producing donuts and for explaining that Erica's opportunity cost of producing one donut ($1/3$ of a cupcake) is less than John's opportunity cost of producing one donut ($1/2$ of a cupcake).

(c) 2 points:

- One point is earned for indicating that John will benefit from specialization and trade.
- One point is earned for indicating that Erica will not benefit from specialization and trade.



(d) 1 point:

- One point is earned for drawing a correctly labeled graph of Erica's production possibilities curve, before the technology change, and for rotating the production possibilities curve outward showing greater production of cupcakes after the technology change.

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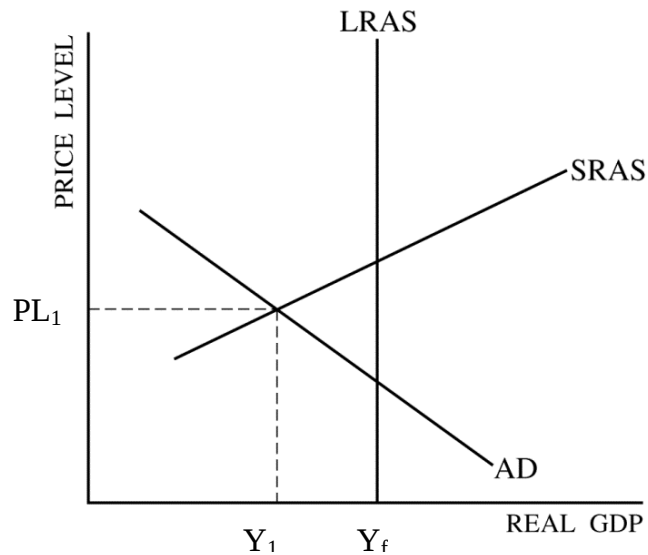
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2014 SCORING GUIDELINES

Question 1

11 Points (2+2+1+2+2+2)

2 points:

- One point is earned for drawing a correctly labeled graph showing an equilibrium with AD, SRAS, Y_1 , and PL_1 labeled.
- One point is earned for drawing a vertical LRAS curve at Y_f to the right of the intersection of AD and SRAS.

2 points:

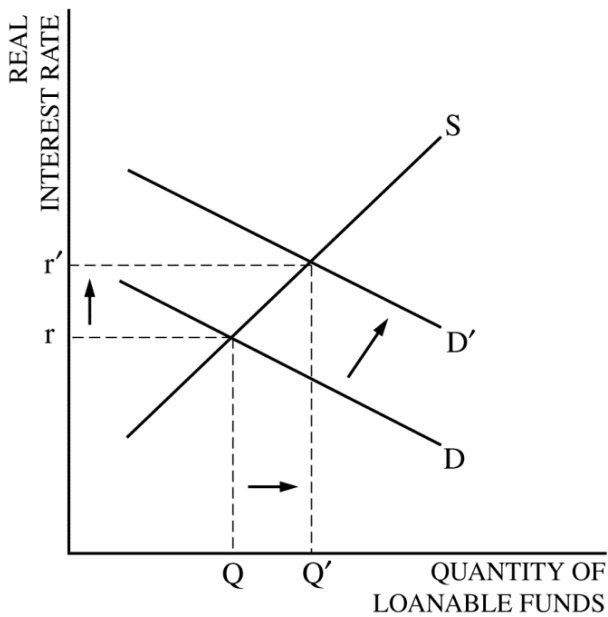
- One point is earned for stating that cyclical unemployment will decrease.
- One point is earned for stating that the natural rate of unemployment will not change.

1 point:

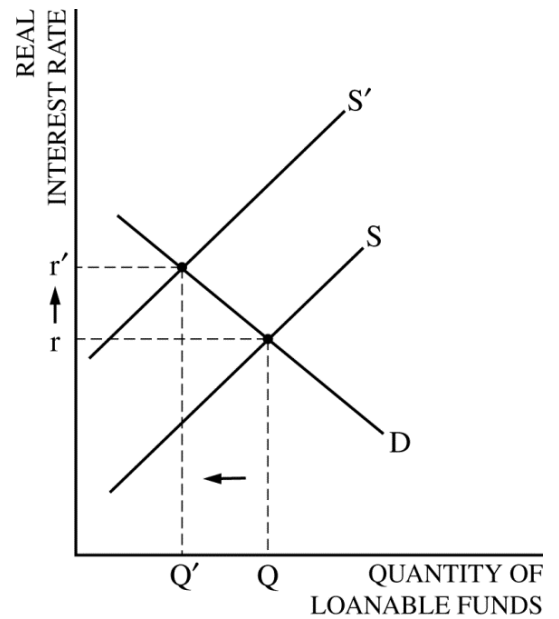
- One point is earned for calculating the maximum change in real GDP:
 $\text{Change in GDP} = (1/0.25) \times \$100 \text{ billion} = \$400 \text{ billion}.$

2014 SCORING GUIDELINES

Question 1 continued



OR



2 points:

- One point is earned for drawing a correctly labeled loanable funds market graph.
- One point is earned for shifting the demand curve to the right (or shifting the supply curve to the left) and showing an increase in the real interest rate.

2 points:

- One point is earned for stating that the economic growth rate will fall.
- One point is earned for explaining that the higher real interest rate will slow down capital formation.

2 points:

- One point is earned for stating that real gross domestic product will increase.
- One point is earned for explaining that the expansionary effect of the increase in government spending outweighs the contractionary effect of the increase in taxes of the same size. (Or students may explain by calculating the net increase in GDP, \$100 billion, or stating the tax multiplier is smaller than the spending multiplier.)

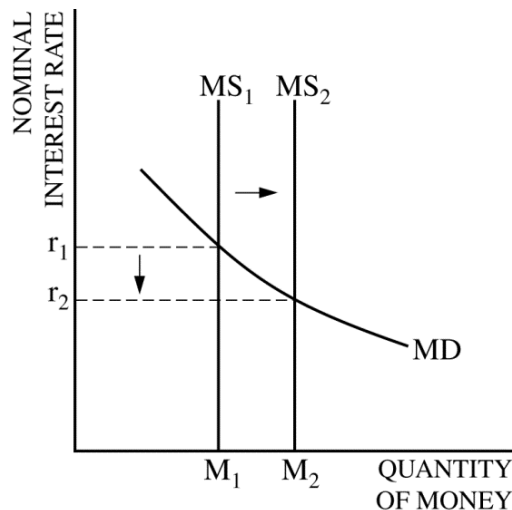
2014 SCORING GUIDELINES

Question 2

6 points (2+2+1+1)

2 points:

- One point is earned for stating that the Federal Reserve will buy government bonds.
- One point is earned for stating that the price of government bonds will increase.



2 points:

- One point is earned for drawing a correctly labeled graph of the money market.
- One point is earned for shifting the money supply curve to the right and showing a decrease in the nominal interest rate.

1 point:

- One point is earned for stating that the Federal Reserve purchase will not initially affect commercial banks' required reserves.

1 point:

- One point is earned for defining the discount rate as the interest rate that the Federal Reserve charges banks for borrowing from its discount window.

2014 SCORING GUIDELINES

Question 3

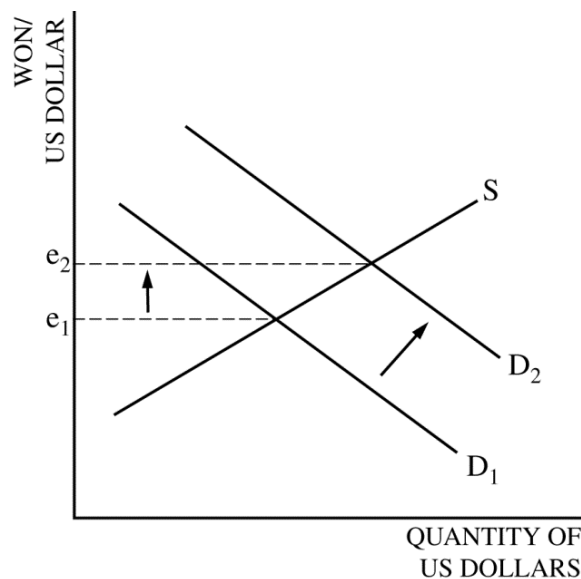
5 points (1+2+2)

1 point:

- One point is earned for stating that United States exports to South Korea will increase.

2 points:

- One point is earned for stating that the United States current account will be in surplus.
- One point is earned for stating that the United States gross domestic product will increase and explaining that higher U.S. exports increase AD (or that production increases to meet the increased export demand from South Korea).



2 points:

- One point is earned for drawing a correctly labeled graph of the foreign exchange market for the U.S. dollar.
- One point is earned for shifting the demand curve for the dollar to the right (and/or shifting the supply curve to the left) and showing an increase in the won price per dollar.